

REMARKS

The patent application was filed with 19 claims, three of which, claims 1, 6 and 8, are in independent form. All 19 claims stand rejected. Claims 1, 6 and 8 are amended.

The Examiner has objected to claims 1, 6 and 8 due to the fact that the Examiner believes that the terms “maps” and “mapping engine” do not seem proper. Applicant respectfully traverses this objection.

The Examiner refers to page 6 of the specification when the Examiner sets for the confusion with regard to the map engine 34. More specifically, the Examiner is referring to the sentence “the map engine 34 is the link between each of the clients 12 and the modular assembly of software 10.” This sentence is a general introduction of the map engine. More detailed discussion of the map engine and how it operates begins in paragraph [0029], page 7 and paragraph [0033], page 8. In the latter paragraph, it states “the map engine coordinates an order and timing for the starting of each of the plurality of maps 36 wherein the map engine 34 modifies the order and the timing based on inputs and variables received by the map engine 34 before and during the operation of the plurality of maps 36. The map engine 34 includes a prioritizer 54.”

Further to the definition of map, Webster’s Third New International Dictionary, copyright 1993 by Miriam-Webster, Incorporated cites a definition of map as being “to arrange, delineate or plan the details of” (copy enclosed). Therefore, it is respectfully submitted that Applicant is using map and map engine in terms that are typically used by those skilled in the art. Further, sufficient disclosure of how these terms are being used are set forth clearly in the specification.

Claims 1 through 19 stand rejected under 35 USC §101 because the claimed invention is directed to non-statutory subject matter. More specifically, the Examiner sets forth that method claims and claims that recite a judicial exception “software” need to recite a practical application. “Practical application can be provided by a physical transformation or a useful,

concrete and tangible result,” (office action page 3). Applicant respectfully traverses this rejection.

Claim 1, 6 and 8 have been amended to clarify the invention and overcome the rejection under 35 USC §101. More specifically, the terms relating to a function have been replaced with a defined task. Referring to the application, Applicant sets forth in Figure 7 four tasks worth highlighting for this discussion. They include station connecting, model set up, production start, and material depleted. In addition, Figure 8 sets forth an atom for “check for safety stock requirement.” In paragraph [0018], Applicant sets forth the statement “the modular assembly of software 10 is designed to promote such characteristics as flexibility, adaptability, interoperability, performance and scalability in order to easily accommodate companies that continue to reinvent their business processes, whether they are on the shop floor or in a retail outlet.” This is clearly a useful, concrete and tangible result.

In addition, paragraph [0019] states “the system is designed to be hardware independent to facilitate the communication between various pieces of hardware that may be required to complete a task.” This is clearly useful, concrete and tangible. More specifically, the system is designed to communicate between pieces of hardware and as such, is considered practical. In paragraph [0024], Applicant sets forth a defined task as “identifying when material has arrived, recording cycle times for the production of a part, taking measurements of temperatures, and the like.” Clearly these are practical applications, they are useful, concrete and tangible.

Paragraph [0026] further indicates that customer may “create a defined task wherein the defined task is completed in the order best defined by the business procedures of the customer.” And finally, in paragraph [0027], “the defined task and the output is transmitted to the appropriate component for **use, analysis or viewing**,” (emphasis added). Clearly the defined task is used for a practical use. Clearly the specification and claims, as amended, set forth a practical application as is defined in State Street Bank. Therefore, claims 1 through 19 overcome the rejection under 35 USC §101.

Claims 1 through 19 stand rejected under 35 USC §102(b) as being anticipated by United States Patent 6,282,699 (hereinafter the “ ’the 699 reference”). Applicant respectfully traverses this rejection.

The ’699 reference discloses a system and method for creating a system and method for creating a graphical program. The ’699 reference discloses a system that relies on third party programs. A requirement for the third party software to be compiled is a requirement in order for the graphical program to operate. “Once the graphical program has been created, then the graphical program may be then compiled into machine language instructions for execution. The graphical program may also be interpreted as desired. In the preferred embodiment, when the user selects “run,” the graphical program is compiled into machine language instructions and the machine language instructions are then executed,” (column 9, lines 34-40).

Claim 1, as amended, claims a modular assembly of software configured to operate hardware. The modular assembly includes a plurality of atoms, each of the plurality of atoms designed to execute a defined task. A plurality of maps invoke a portion of the plurality of atoms for executing events that include a portion of the defined tasks. A map engine is in communication of each of the plurality of maps. The map engine coordinates an order and a timing for starting each of the plurality of maps when the map engine modifies the order and timing based on inputs and variables received thereby before and during operation of the plurality of maps to perform or modify the operation of the hardware.

While the ’699 reference discloses a graphical program including code nodes that may be added by dragging and dropping such elements across a screen display, the system is not capable of modifying the operation of hardware during the operation thereof. More specifically, the invention disclosed in the ’699 reference requires the steps of saving a code node configuration, compiling the code node configuration and loading the code node configuration into a system in machine language.

In contradistinction, claim 1, as modified, is a system that allows the changing of the performance of the operation of hardware without the steps of compiling and loading. More specifically, the map engine is capable of changing the order and timing based on the inputs

and variables received **before and during the operation thereof**. The invention disclosed in the '699 reference is not capable of being modified during the operation thereof. **The invention disclosed in the '699 reference must be taken offline, changed, saved, compiled and loaded before the disclosed system will work in its new modified form.** The subject invention does not require such steps, which result in downtime and lost efficiency. Therefore, claim 1 and all claims depending therefrom overcome the rejection under 35 USC §102(b).

Claim 6, as amended, claims a modular assembly of software configured to operate hardware. The modular assembly includes a plurality of atoms, each of the plurality of atoms including a design element and an execution element. A plurality of maps invoke a portion of the plurality of atoms for executing events that include a portion of the defined tasks. A map engine is in communication of each of the plurality of maps. The map engine coordinates an order and a timing for starting each of the plurality of maps when the map engine modifies the order and timing based on inputs and variables received thereby before and during operation of the plurality of maps to perform or modify the operation of the hardware.

While the '699 reference discloses a graphical program including code nodes that may be added by dragging and dropping such elements across a screen display, the system is not capable of modifying the operation of hardware during the operation thereof. More specifically, the invention disclosed in the '699 reference requires the steps of saving a code node configuration, compiling the code node configuration and loading the code node configuration into a system in machine language.

In contradistinction, claim 6, as modified, is a system that allows the changing of the performance of the operation of hardware without the steps of compiling and loading. More specifically, the map engine is capable of changing the order and timing based on the inputs and variables received **before and during the operation thereof**. The invention disclosed in the '699 reference is not capable of being modified during the operation thereof. **The invention disclosed in the '699 reference must be taken offline, changed, saved, compiled and loaded before the disclosed system will work in its new modified form.**

The subject invention does not require such steps, which result in downtime and lost efficiency. Therefore, claims 6 and 7 overcome the rejection under 35 USC §102(b).

Claim 8, as amended, claims a method for operating hardware using a plurality of defined tasks, a map engine, a plurality of maps and a plurality of atoms. The method includes the steps of activating the map engine, cataloging each of the plurality of atoms, identifying an occurrence, loading one of the plurality of maps, and executing each of the plurality of atoms.

While the '699 reference discloses a graphical program including code nodes that may be added by dragging and dropping such elements across a screen display, the system is not capable of modifying the operation of hardware during the operation thereof. More specifically, the invention disclosed in the '699 reference requires the steps of saving a code node configuration, compiling the code node configuration and loading the code node configuration into a system in machine language.

In contradistinction, claim 8, as modified, is a method that allows the changing of the performance of the operation of hardware in response to the occurrence of an event without the steps of compiling and loading. More specifically, the map engine is capable of changing the order and timing based on the inputs and variables received **before and during the operation thereof**. The invention disclosed in the '699 reference is not capable of being modified during the operation thereof. **The invention disclosed in the '699 reference must be taken offline, changed, saved, compiled and loaded before the disclosed system will work in its new modified form.** The subject method does not require such steps, which result in downtime and lost efficiency. Therefore, claim 8 and all claims depending therefrom overcome the rejection under 35 USC §102(b).

None of the references neither cited by the Examiner nor discovered by the Applicant disclose the invention set forth in the claims. More specifically, none of the references disclose a modular assembly for software used to modify the operation of hardware which includes a system for modifying the execution of defined tasks before or during the operation of those defined tasks.

Amendment
Serial No. 10/765,290

It is respectfully submitted that this patent application is in condition for allowance, which allowance is respectfully solicited. If the Examiner has any questions regarding this amendment or patent application, the Examiner is invited to contact the undersigned.

Respectfully submitted,

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